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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,776

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Marina Dupcinov

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NIXON & VANDERHYE, PC

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EXAMINER

YOUNG, JANELLE N

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,776

Applicant(s)

DUPCINOV ET AL.

Examiner

Janelle N. Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 is/are rejected.
7) ☒ Claim(s) 5-6 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Inventor's Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1- 8 have been considered but are moot in view of the new ground(s) of rejection.

See rejection below.

Response to Amendment

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

(determining if the second node is already listed in the table maintained by the first node ;

if the second node is already listed in the table maintained by the first node, comparing the signal strength of the first signal to a first predetermined ~~comparison level~~ signal strength threshold;

if the signal strength of the first signal exceeds ~~either the first or second predetermined comparison level~~ signal strength threshold, adding the second node to the table.

and if the signal strength of the first signal does not exceed the second predetermined signal strength threshold, **discarding the first signal and continuing to not list the second node in the table.**

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specification only supports "If the second node is already present in the table maintained by the first node, the signal strength is compared to a first predetermined comparison level, if the second node is not present in the table, its signal strength is compared to a second predetermined comparison level, and/or adding/discarding nodes based on thresholds being exceed or not" and "Nodes are added or maintained on this list on the basis of messages which are received form these nodes. "There is no mention of determining, comparing signal strength of the first signal, a signal strength threshold, and/or and continuing to not list.

Claims 7-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter (**first and second predetermined signal strength thresholds correspond to first and second predetermined signal-to-noise ratios (SNRs)**) which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim(s) 3 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim(s) 3 and 6 are recite "IEEE 802.11" which is indefinite since the "IEEE 802.11" specification can be changed, modified, or updated over time with different version or year. In the present case, the "IEEE 802.11" is used to identify/describe a wireless communications protocol and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuemiller et al. (US Patent 7180875), Liu et al. (US Patent 7184421), and further in view of Balogh (US Pub 2001/0024953).

As for claim 1, Nuemiller et al. teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network (Abstract; Col. 3, line 48-Col. 4, line 29; Col. 5, line 39-Col. 6, line 8; Col. 6, lines

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17-43 of Nuemiller et al.) receiving a first signal from a second node (Col. 1, lines 29-50 and Col. 5, line 39-Col. 6, line 43 of Nuemiller et al.) if the second node is already listed in the table maintained by the first node (Col. 7, lines 55-59 of Nuemiller et al.)

What Nuemiller et al. does not explicitly teach is adding the second node to the table.

However, Lui et al. teaches an ad-hoc Wireless Local Area Network (WLAN) comprising of: if the signal strength of the first signal exceeds ~~either the first or second~~ predetermined ~~comparison level~~ signal strength threshold, adding the second node to the table, and if the signal strength of the first signal does not exceed the second predetermined signal strength threshold, discarding the first signal and continuing to not list the second node in the table. (Fig. 4; Fig. 10; Col. 8, line 41-Col. 9, line 3; Col. 13, line 41-Col. 14, line 29; and Col. 20, lines 22-47 with respect to Fig. 14; Col. 14, line 33-Col. 15, line 4; Col. 24 line 22-Col. 25, line 67 of Lui et al.)

What Nuemiller et al. does not explicitly teach is the comparison of predetermined level/conditions.

However, Balogh teaches an ad-hoc Wireless Local Area Network (WLAN) comprising of: analyzing the first signal to determine its strength (Page 1, Para 0006-0007 of Balogh); determining if the second node is already listed in the table maintained by the first node, comparing the signal strength of the first signal to a first predetermined ~~comparison level~~ signal strength threshold (Page 1, Para 0007-0009 and Page 4, Para 0035 of Balogh); and signal levels of the first and the second access point are compared and it is checked if the difference of signal levels of the first access point and

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the second access point is above the pre-determined signal level limit; which reads on claimed if the signal strength of the first signal exceeds the first predetermined signal strength threshold, maintaining the second node in the table, and if the signal strength of the first signal does not exceed the first predetermined signal strength threshold, discarding the first signal. (Pages 1-2, Para 0010 of Balogh), the second access point with better connection attributes; which reads on claimed if the second node is not listed in the table maintained by the first node, comparing the signal strength of the first signal to a second predetermined strength threshold comparison level greater than the first predetermined signal strength threshold. (Page 6, Para 0050 of Balogh).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the equipment for supporting mobility in telecommunication system, as taught by Balogh, in the method for distribution of routes for routing data packets in Ad-Hoc networks of Nuemiller et al., because Nuemiller et al. already teaches messaging type selected by a mobile terminal (or node) varies based on the mobility of the communicating terminals (Col. 8, lines 26-67 of Nuemiller et al.). In addition, it would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a way to maintain network configuration hierarchy information and flexible mechanisms for establishing routes and transferring information between nodes in ad-hoc data communication networks using on-demand multicast and unicast techniques as taught by Lui et al., in the method for distribution of routes for routing data packets in Ad-Hoc networks of Nuemiller et al., because both Lui et al. and Nuemiller et al. teach a network configuration hierarchy information is maintained using

flexible mechanisms and methods for establishing routes and transferring information between nodes in ad-hoc data communication networks.

The motivation of this combination would be capable of effectively and efficiently handling fading between mobile wireless user terminals of a packet-switched network with minimal overhead and packet loss in a communications network, as taught by Nuemiller et al. in Abstract. The incorporation would facilitate the mobility of users in a telecommunication system with a plurality of networks (Page 1, Para 0001 of Balogh). The incorporation would also efficiently rout both multicast and unicast messages in communications networks of mobile communications nodes (Col. 1, lines 9-14 of Lui et al.).

As for claim 2, Nuemiller et al. teaches a method for use by a first node in an ad-hoc Wireless teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network, applied in an Ad-Hoc On-demand Distance Vector (AODV) system (Col. 7, lines 10-17 and Col. 8, lines 10-25 of Nuemiller et al.).

As for claim 3, Balogh teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network, applied in an IEEE 802.11 – type system (Fig. 1 and Page 2, Para 0018 & 0021-0022 of Balogh).

Regarding claim 4, see explanation as set forth regarding claim 1 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

Regarding claim 5, see explanation as set forth regarding claim 2 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

Regarding claim 6, see explanation as set forth regarding claim 3 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

As for claim 7 (new), Nuemiller et al. teaches a wherein the first and second predetermined signal strength thresholds correspond to first and second predetermined signal-to-noise ratios (SNRs). (Col. 7, line 10-Col. 8, line 9 of Nuemiller et al.)

Regarding claim 8 (new), see explanation as set forth regarding claim 7 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 10:00 am through 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Janelle N. Young/
Examiner, Art Unit 2618

/Nay A. Maung/
Supervisory Patent Examiner, Art
Unit 2618